

Gap Crossings: Not Just a Tactical Problem

**A Monograph
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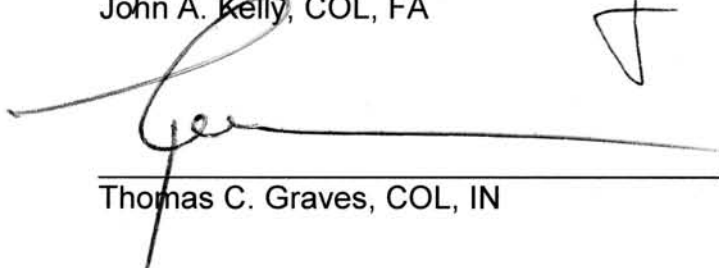
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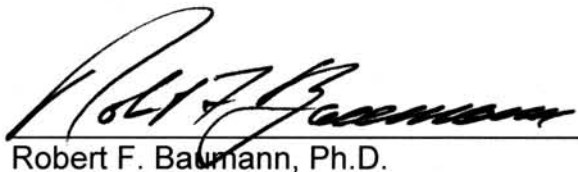
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Abstract

Gap Crossings: Not Just a Tactical Problem by Major Kristen N. Dahle, U.S. Army, 40 pages.

The focus of this thesis is to determine how U.S. Army corps and divisions ensure deliberate gap crossings, a type of combined arms operation, are planned using operational art. Examination of doctrine for gap crossings shows gap crossings to be tactical problems. Corps, division, and operational art doctrine does not directly address the need to incorporate gap crossings as part of an overall campaign.

This paper compares two case studies from World War II in their strategic context with tactical outcomes using operational art. The failed crossing of the Rapido River in Italy and the successful crossing of the Irrawaddy in Burma are the two historical case studies examined. Operational art considered for each campaign shows the importance of the planners' and commanders' understanding and communication of not only the tactical requirements of a gap crossing but also how the crossing is part of the larger operation to achieve the strategic goals.

Current gap crossing doctrine is tactically focused and should remain tactically focused. This monograph determined operational planners and commanders at the division and corps must understand operational art and incorporate it into the planning of a gap crossing like any other tactical action to facilitate the success of a campaign.

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Introduction

Although recent conflicts have placed emphasis on the counterinsurgency fight, potential conflicts still may include combined arms gap crossings. Gap crossings by American forces under direct fire of the enemy have not been done since Vietnam, and the last combined arms crossing during an operation was in 1995 against only nature as an enemy.¹ Over the last century the U.S. Army has undergone several changes in river crossing techniques and equipment, engineer force structure, and gap crossing doctrine. The tactical requirements of a gap crossing are well documented but with the completion of modularity, U.S. Army corps and divisions have significantly fewer engineers and thus river crossing assets. Does the reduced force structure still have the ability to conduct a deliberate gap crossing in accordance with the latest doctrine? The last deliberate gap crossing, a type of combined arms operation, conducted at the division level was before modularity.² More importantly the current update to gap crossing doctrine *FM 3-90.12 Combined Arms Gap Crossing Operations* is tactically focused and does not incorporate the operational art of *FM 3-0 Operations*.³

The focus of this thesis is to determine how U.S. Army divisions ensure deliberate gap crossings, a type of combined arms operation, are planned using operational art. The current gap crossing doctrine is tactically focused; it will be up to the commander and the operational planners to incorporate operational art to conduct a successful gap crossing to facilitate the success of the campaign. The analysis of historical case studies in their strategic context with tactical outcomes using the definition of operational art to compare each will show the

¹ William D. Brinkley, *Proposed Force XXI Engineer Designs: Viable Combat Multipliers?* monograph (Fort Leavenworth, KS: U.S. Army School of Advanced Military Studies, 1998), 13.

² Ibid.

³ U.S. Department of the Army, *Field Manual 3-90.12 Combined Arms Gap Crossing Operations* (Washington, DC: Government Printing Office, 2008). U.S. Department of the Army, *Field Manual 3-0 Operations change 1* (Washington, DC: Government Printing Office, 2010).

importance of the planners' and commanders' understanding of not only the tactical requirements of a gap crossing but tying the crossing to a larger operation to achieve the strategic goals. The current gap crossing doctrine is tactically focused; it will be up to the operational planners and commanders at the division to incorporate operational art to conduct a successful gap crossing to facilitate the success of the campaign.

Organization

The first section of this monograph analyzes documentation on gap crossings. This analysis will give a better understanding of historical river crossings literature, U.S. Army gap crossing doctrine, and summarize previous studies completed on river crossing doctrine. The second section examines operational art theory, current U.S. Doctrine including operational art, and previous gap crossings studies using operational art. The third section examines two historical gap crossings. The first will analyze a failed opposed gap crossing and the second a successful opposed gap crossing. Through the examination of these two case studies for elements of operational art, the hypothesis will be proved or disproved in the final section.

Gap Crossing Literature

This section of the monograph covers historical gap crossing documentation, changes in U.S. Doctrine, and previous papers evaluating techniques, force structure, and doctrine.

Beginning with pre-twentieth century articles and continuing to the present, river-crossing literature falls into three general categories. The first is simply a narrative of what happened during a battle that included a river crossing of some type. The second consists of recommendations on how to conduct a crossing for different types of scenarios. The most recent documentation expands to include the organization of engineer assets, techniques to conduct gap crossings, and the tenets or fundamentals of gap crossings.

Narratives are typically descriptions of river crossings with a few outlining tactical principles. This method is prevalent for river crossing documentation prior the First World War

as a basis for analyzing the tactical and technical considerations.⁴ The interwar period writing incorporates several different scenarios that may be encountered when crossing a river or a stream including how different branches support the engineers during the crossing, and equipment required.⁵

The majority of World War II literature is typically after action review type narratives. They included ways to best use infantry, fires, and expanded with the introduction of new equipment and technology of the time.⁶ The Korean War articles describe how to support a river crossing and planning considerations further expanding scenarios.⁷ Vietnam era to present documentation focused on organization of engineer assets, techniques to conduct gap crossings, and the tenets or fundamentals of gap crossings.⁸

Development of U.S. Army Gap Crossing Doctrine

U.S. doctrine on river crossings evolved slowly over the last century. Based on engineer experiences in the First World War, doctrine and equipment changes were not made during the interwar period for a number of reasons.⁹ According to Robert Toguchi, "Participants of World War II witnessed large-scale river crossings and the development of major innovations in the

⁴ Benjamin E. Thurston, "River Crossings: Tactical Principles and Methods Brought out by Four Historical Examples," *Infantry Journal* (Jan 1929): 32-36.

⁵ C.H. Mackelfresh, "Some Infantry Phases of Stream Crossings: An Old Subject in New Form," *Infantry Journal* (Dec 1928): 575.

⁶ M.E. Barker, "Smoke for River Crossings," *Infantry Journal* (Jan 1946): 37-41. John M. Ericson, "Some Technical Aspects of an Opposed River Crossing," *Military Review* (Oct 1944): 9-16.

⁷ Emerson C. Itschner, "The Naktong River Crossing in Korea," *Military Engineer* (Mar 1951): 96-100.

⁸ Edwin J. Arnold Jr., *American River Crossing Doctrine: A Look at its Compatibility with Current Force Structure and the Modern Battlefield* monograph (Fort Leavenworth, KS: U.S. Army School of Advanced Military Studies, 1985).

⁹ Robert M. Toguchi, *The Evolution of United States Army River Crossing Doctrine and Equipment, 1918-1945* (Ann Arbor, MI: A Beil & Howell Company), i-ii.

evolution of river crossing doctrine and equipment.”¹⁰ Following the Second World War, U.S. Army river crossing doctrine underwent several updates but no significant changes. The last update to river-crossing doctrine, now called gap crossing, published in 2008 focused on support of assured mobility. The changes from one doctrine to the next was not a smooth transition but one of fits and starts based on the needs of the Army of the time.

The First World War successful river crossings did not encourage changes to doctrine. In fact there was not a coherent published doctrine for gap crossings. The subsequent severe reduction of the force and funding cuts hampered the ability of engineers to invest time and money into new technology. This lack doctrine and gap in technology severely affected the Second World War.

World War II displayed both successful and unsuccessful gap crossings. The most significant failure at the Rapido River during the Italian Campaign is the example used later in this paper. One reason cited for the catastrophic failure to cross was the doctrine. The Field Manual (FM) *FM 100-5 Operations* from 1939 said, “In a river crossing the principal objective is to gain the far side of the river as quickly as possible and establish a bridgehead which will protect the bridging operations and the crossing of the remainder of the command.”¹¹ This indicates that a river crossing was a stand-alone operation and did not focus on the defeating the enemy on the far side of the river. In 1944, the doctrine changed to state, “the actual crossing is a means, not the end sought.”¹² Since World War II, the Army developed a manual solely for river crossing doctrine, *FM 31-60 River Crossing Operations* in 1958 renamed *FM 90-13 River Crossing Operations* in 1977. The different versions of *FM 31-60* and *FM 90-13* written between

¹⁰ Toguchi, *Evolution*, 20.

¹¹ U.S. Army, Tentative Field Service Regulations, *Field Manual 100-5 Operations* (Washington, DC: Government Printing Office 1939), 209.

¹² U.S. Army Field Service Regulations, *Field Manual 100-5 Operations* (Washington, DC: Government Printing Office, 1944), 227.

1958 and 1990 updated equipment but used the same techniques as those outlined by the 1939 doctrine.¹³ Additional FMs that included river-crossing information *FM 100-15 Corps Operations* and *FM 71-100 Division Operations* also underwent several revisions. It is from these previous river crossing doctrines that current gap crossing doctrine was developed.

The base river crossing doctrine *FM 90-13* which had not been updated since 1998 recently changed to *FM 3-90.12 Combined Arms Gap-Crossing Operations* the current U.S. doctrine as of 2008. *FM 3-90.12* follows the tenets found in *FM 3-90*, *FM 3-34*, and *FM 3-34.2* however does not include the term operational art from *FM 3-0*.¹⁴ The new gap-crossing manual provides detailed guidance on integrating gap crossing into mobility operations but does not outline how to ensure the elements of operational art are considered. The corps operations field manual updated in 2010 is now *FM 3-92 Corps Operations* but only mentions gap crossings as a function of the engineer brigade.¹⁵ The division operations doctrine *FM 71-100 Division Operations* devoted a few pages to river crossings. According to *FM 71-100*, division river crossing operations project combat power across a waterway while ensuring the integrity and momentum of the force. Additionally, deliberate crossings require detailed planning and preparation.¹⁶ *FM 71-100*, however, has not been updated since 1996.

¹³ U.S. Army Department of the Army, *Field Manual 90-13 River Crossing Operations* (Washington, DC: Government Printing Office), 1992.

¹⁴ U.S. Department of the Army, *Field Manual 3-90.12 Combined Arms Gap Crossing Operations* (Washington, DC: Government Printing Office, 2008). U.S. Department of the Army, *Field Manual 3-90 Tactics* (Washington, DC: Government Printing Office, 2001). U.S. Department of the Army, *Field Manual 3-34 Engineer Operations* (Washington, DC: Government Printing Office, 2009). U.S. Department of the Army, *Field Manual 3-34.2 Combined Arms Breaching Operations change 3* (Washington, DC: Government Printing Office, 2000). U.S. Department of the Army, *Field Manual 3-0 Operations change 1* (Washington, DC: Government Printing Office, 2010).

¹⁵ U.S. Department of the Army, *Field Manual 3-92 Corps Operations* (Washington, DC: Government Printing Office, 2010), 4-27.

¹⁶ U.S. Army Department of the Army, *Field Manual 71-100 Division Operations River Crossing Operations* (Washington, DC: Government Printing Office, 1996), 7-1.

Engineer doctrine for river crossings and gap crossings has undergone changes based on technique, equipment, and force structure however has not incorporated the latest concept of operational art. This could be because a gap crossing is a tactical operation but the manuals that cover the higher echelons or levels of command do not outline how to best plan for the gap crossing in accordance with concept of operational art.¹⁷ The gap crossing, although a tactical operation, is only part of a larger planned operation focused on the enemy. Like all operations, the operational art should be incorporated when planning the gap crossing to ensure the success of the campaign.

Gap Crossing Studies

Several previous gap crossing studies analyzed the U.S. Army's ability to conduct gap crossings. These papers looked at river crossings using historical cases, both successful and unsuccessful attempts, to determine the best techniques for crossing.¹⁸ The authors then compared the techniques identified to conduct a successful crossing to capabilities of the current force structure to identify shortfalls.¹⁹ Finally doctrine was analyzed to determine if the techniques and

¹⁷ U.S. Department of the Army, *Field Manual 3-90.12 Combined Arms Gap Crossing Operations* (Washington, DC: Government Printing Office, 2008).

¹⁸ Edwin J. Arnold Jr., *American River Crossing Doctrine: A Look at its Compatibility with Current Force Structure and the Modern Battlefield*, monograph (Fort Leavenworth, KS: U.S. Army School of Advanced Military Studies, 1985). In this monograph, Major Edwin Arnold's identified nine factors, which promoted successful river crossings in World War II. The nine factors were abundant fire support, overwhelming air superiority, numerous infantry soldiers, piecemeal counterattacks, early bridge construction, active comprehensive reconnaissance, tactical surprise, force-oriented objectives, and 'in-stride' river crossings. Major Arnold then determined the doctrine river crossing doctrine was not tactically sound based on the current force structure. He proposed both doctrinal and force structure changes to increase the success of future gap crossings. These improvements included changing six aspects of river crossing doctrine. First the purpose of the operation must change from the crossing of the river to the defeat of the enemy's defense in depth. Second the assault should be force-oriented instead of terrain oriented. Third when a deliberate crossing is required, additional light infantry are needed to support the mechanized forces. Fourth a successful river crossing requires comprehensive reconnaissance before the operation. Fifth the engineer force requires additional crossing equipment both for bridging and amphibious vehicles. His final point was the Army needed to place more emphasis on hasty crossings.

¹⁹ Gordon M. Wells, *U.S. Army River Crossing Doctrine and AirLand Battle Future: Applicable or Anachronistic?* monograph (Fort Leavenworth, KS: U.S. Army School of Advanced Military Studies,

capabilities supported the current practices.²⁰ The papers used a case study technique to analyze gap crossings under the AirLand Battle concept of *FM 100-5*. These papers examined *FM 90-13* against the force structure of the time and AirLand Battle doctrine. Since the completion of modularity and the publication of the new *FM 3-90.12*, gap-crossing techniques have not been analyzed using operational art under the new *FM 3-0*.

Operational Art in U.S. Army Doctrine

Operational Art in U.S. doctrine began in 1982 and was further refined in 1986. Since then it has gone through changes from AirLand Battle in *FM 100-5 Operations* to Full Spectrum Operations in *FM 3-0 Operations* and finally Unified Operations in emerging doctrine. This evolution of Operational Art has both changed the definition in U.S. doctrine and matured the concept over the last thirty years. At this time gap crossing is not mentioned in the operational art doctrine of the U.S. Army.

In 1982 the Department of the Army revised *FM 100-5 Operations*. As the keystone 'How to Fight Manual,' it marked a significant departure from previous editions of *FM 100-5*, one of which was the operational level of war.²¹ The operational level of war according to *FM 100-5* was a division of warfare falling between the traditional categories of tactics and strategy.²² *FM 100-5 Operations* revised again in 1986 changed the operational level of war to operational

1991). This monograph compared the current river crossing doctrine to Airland Battle doctrine. The author determined the 1990 version of *FM 90-13 River Crossing Operations* supported Airland Battle concepts. He noted there was a need to reevaluate the force structure because river crossings conducted in future war would be decentralized.

²⁰ Albert G. Marin III., *Command and Control of River Crossings: Does Current Doctrine Support AirLand Battle Doctrine Intent?* monograph (Fort Leavenworth, KS: U.S. Army School of Advanced Military Studies, 1992). This monograph focused on command and control of river crossings and whether or not C2 doctrine supported Airland battle.

²¹ Clayton R. Newell and Michael D. Krause, general editors. *On Operational Art* (Washington, DC: Center of Military History United States Army, 1994), iii.

²² U.S. Department of the Army, *Field Manual 100-5 Operations* (Washington, DC: Government Printing Office, 1982), 2-3.

art. Operational art as defined by *FM 100-5* in 1986 is the employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations.²³ Under the concept of AirLand Battle, Operational Art had only three components: center of gravity, lines of operation, and culminating points. The 1993 version of *FM 100-5* states, “since battle is translated into strategic objectives by operational art, a major portion of the manual addresses the operational level of war.”²⁴ This final version of *FM 100-5* recognized the Cold War was over, causing AirLand Battle to evolve into a doctrine for the full dimensions of the battlefield in a force projection environment. Operational Art, according to the 1993, version was “the employment of military forces to attain strategic goals through the design, organization, integration, and execution of battles and engagements into campaigns and major operations. In war, operational art determines when, where, and for what purpose major forces will fight over time.” This definitional change lasted until 2001 with the introduction of *FM 3-0 Operations*.

In 2001 the first *FM 3-0 Operations* was published with the concept of Full Spectrum Operations and a further expanded definition of Operational Art and its elements. *FM 3-0 Operations* maintained a similar definition to the 1993 *FM 100-5*, “Operational art determines when, where, and for what purpose major forces are employed to influence the enemy disposition before combat.”²⁵ This version of *Operations* introduces the concept of operational design as how “Operational art is translated into operation plans.”²⁶ The elements of operational design in the

²³ U.S. Department of the Army, *Field Manual 100-5 Operations* (Washington, DC: Government Printing Office, 1986), 10.

²⁴ U.S. Department of the Army, *Field Manual 100-5 Operations* (Washington, DC: Government Printing Office, 1993), v.

²⁵ U.S. Department of the Army, *Field Manual 3-0 Operations* (Washington, DC: Government Printing Office, 2001), 2-3.

²⁶ U.S. Department of the Army, *Field Manual 3-0 Operations* (Washington, DC: Government Printing Office, 2001), 2-4.

2001 version expanded the three from *FM 100-5* in 1993 to also include: end state and military conditions; decisive points and objectives; operational reach, approach, and pauses; simultaneous and sequential operations; linear and nonlinear operations; and tempo. The Full Spectrum Operations concept of *FM 3-0* has undergone two additional revisions one in 2008 and the most recent in 2010 but maintain the same elements.

In 2011, *FM 3-0* is again being revised under emerging doctrine as Unified Land Operations. Unified Land Operations defines Operational Art as “the pursuit of strategic objectives, in whole or in part, through the arrangement of tactical actions in time, space, and purpose.”²⁷ This latest change in doctrine brings back some of the more useful concepts from the previous AirLand Battle such as deep, close, rear under the operations framework and retains the Full Spectrum Operations concepts to assist commanders in visualizing and describing operations. These changes may help in describing the plan of a gap crossing but as stated earlier, gap crossing doctrine is tactically focused so the operational planners and commander must ensure the elements are taken into consideration when the plan is developed.

Case Studies

This section uses two historical case studies to analyze gap crossings using the definition of operational art. The first study is of the failed crossing of the Rapido River during the Second World War in Italy. It is an example of how seriously ill planned gap crossings can affect meeting operational objectives and delaying the achievement of the strategic aims. Several previous studies analyzed the failure of the Allied forces to cross the Rapido River from different perspectives. Colonel Fred L. Walker, Jr. wrote an article determining that the crossing of the

²⁷ U.S. Department of the Army, *ADP Unified Land Operations* (Washington, DC: Government Printing Office, 2011), 9.

Rapido River as an impossible mission at the time.²⁸ Robert M. Toguchi wrote a doctoral thesis citing lack of doctrine and proper equipment was the cause of the failure at the Rapido River.²⁹ This study focuses on operational art highlighting how a failure to communicate the end state of the plan to subordinates conducting the tactical mission results in a failure to achieve the strategic aims.

This second case study covers the British crossing of the Irrawaddy River during the Second World War in Burma. Although the Burma campaign gap crossings had similarities to the Italian campaign, this opposed river crossing was successful. There are several reasons for the success to include a seamless translation of the strategic aims using operational art into tactical actions to achieve those aims. Operational art will again be examined to show how when taken into consideration an operation has a better chance of success.

Both the studies outline the strategic aims of the individual campaign and the tactical actions on the ground to achieve those goals. Examining these case studies show planning for a gap crossing cannot just take into consideration the tactical actions on the ground but must incorporate operational art in order to be successful to achieve the strategic aims of a campaign.

Case Study 1: A River Crossing Failure

The decision to attack Sicily came out of the Third Washington Conference (TRIDENT) in May 1943.³⁰ The planning for the Allied invasion of the Italian mainland began June 1943, initially General Dwight D. Eisenhower, the theater commander, was given flexibility to pursue operational objectives. The two main aims were to eliminate Italy from the Axis alliance and

²⁸ Fred L. Walker, Jr., *Mission Impossible at Cassino: The First Assault Across the Rapido River Near Cassino in World War II, January 1944* (letter to Librarian August 14, 1986).

²⁹ Toguchi, *Evolution*, 22.

³⁰ G.A. Sheppard, *The Italian Campaign, 1943-1945: A Political and Military Reassessment* (New York, NY: Praeger, 1968), 3.

divert German divisions away from both Russia and northwest Europe to support the planned cross channel attack into France. The Allied leaders set about planning a series of offensives to bring Rome into Allied hands by Christmas.³¹ Italy however was a secondary theater of operation with limited strategic resources available for the campaign, which severely affected planning and execution of tactical actions.

The Italian campaign of the Second World War began with Operation Husky the invasion of Sicily on 10 July 1943. The Allies confirmed the decision to continue the attack to the Italian mainland under Operation Avalanche on 26 July.³² The Allied forces intended to force the Italians to surrender, leaving the Germans without an ally in the south. Mussolini at the time refused help from Hitler but soon requested additional German forces to enter Italy. Sicily fell to the Allied forces on 17 August 1943 with the capture of 147,000 Axis soldiers and 12,000 Axis casualties.³³ The next step was to invade mainland Italy with the goal of reaching Rome by Christmas 1943. British Prime Minister Winston Churchill considered Rome a very important political and psychological objective.³⁴ If captured, it would mean prestige for the Allies and disgrace for the Germans.³⁵ The Allied capture of Rome seemed to be the end state of the Italian campaign, however, there was no real description of the condition of the German forces once this end state is achieved.

³¹ Edwin P Hoyt, *Backwater War: The Allied Campaign in Italy, 1943-1945*, 1st ed. (Boston, MA: Praeger, 2002), 91.

³² Samuel Eliot Morison, *History of the United States Naval Operations in World War II, Volume IX, Sicily-Salerno-Anzio, January 1943 – January 1944* (Boston, MA: Little, Brown And Company, 1975), 233.

³³ Hoyt, *Backwater War*, 55.

³⁴ Carlo D'Este, *Fatal Decision: Anzio and the Battle for Rome* (New York, NY: HarperCollins Publishers, 1991), 93.

³⁵ U.S. Army, *CSI Battlebook 22-A Rapido River Crossing* (Fort Leavenworth, KS: Combat Studies Institute, 1984), 5.

The Italian government agreed to an armistice with the Allies on 3 September 1943. The German forces prepared to defend Italy without the Italian forces. The decision to reduce the forces in Italy by seven divisions to build up resources for the future cross channel attack into France during the fourth Allied conference Quadrant in August 1943 would make achieving the end state of the Italian campaign more difficult for the Allies. The invading force from the Allies under the Fifteenth Army Group commanded by British General Harold Alexander including the British Eighth Army under General Bernard Montgomery and the U.S. Fifth Army under General Mark Clark would now have only eleven divisions to attack the defending nine German division in the south and additional eight in northern Italy.³⁶

The U.S. Fifth Army conducted an amphibious assault at Salerno on 9 September 1943. The Allies hoped with the surrender of the Italian government the Germans would withdraw to the north. This was not what happened, instead the Germans destroyed the ports, mined the harbor, and booby-trapped various buildings in Naples to prevent the Allied forces a southern port on the continent. The Germans also built a series of defensive belts to delay the Allied forces. The Volturno Line, created to slow the Allies leaving Naples, allowed time for additional defensive belts to be prepared. Three additional defensive belts followed the Volturno Line to delay the Allies from taking Rome. The Barbara Line ran along the ridge of high ground between the Volturno and Garigliano Rivers and then over the Appenine Mountains to the Trigno River. The Bernhardt Line consisted of a series of strong points in depth. The final defensive belt, the Gustav Line, located at the narrowest part of the Italian peninsula, ran along the Garigliano and Rapido Rivers to Cassino and then over the Appenine Mountains to the Sangro River on the coast

³⁶ Hoyt, *Backwater War*, 90.

of the Adriatic Sea.³⁷ The three defensive belts, Barbara, Bernhardt, and Gustav Lines, allowed the Germans to use minimal forces while still inflicting maximum damage on the Allied forces.³⁸

As the British, American, and French soldiers under General Alexander moved north they encountered increasingly difficult terrain. The mountains and rivers in southern Italy made it easy for the Germans to defend and very difficult for the Allies to push north. The Allies only finally broke the Volturno Line defensive belt because the Germans fell back to the next prepared defensive belt after delaying until 15 October 1943.³⁹ The goal of Allied forces of reaching Rome by December 1943 was clearly unachievable with the additional defensive belts to fight through. The Allies in Italy were only a third of the way to the goal of Rome after seven weeks of fighting. Before reaching Rome they would have to cross the additional defensive belts and advance twice the distance in only eight weeks to arrive in Rome by Christmas. Throughout this campaign the Germans controlled the tempo of the operations. The Allied forces seem unable to do more than continually push directly on the defensive belts. The Allies needed a decisive offensive operation to regain the initiative.⁴⁰ General Alexander believed the only way to accomplish this was to attack.⁴¹

The last two months of 1943, the Allies assaulted the Bernhardt Line suffering high casualties. Both the British and the American units were plagued by bad weather and excellent German defenses. In December the Italian campaign was assigned to the British for command. General Henry M. Wilson took command as the supreme commander in the Mediterranean and renewed focus on an amphibious assault operation behind the Gustav line to destabilize German

³⁷ Toguchi, *Evolution*, 83.

³⁸ Martin Blumenson, *United States Army in World War II, The Mediterranean Theater of Operations, Salerno to Cassino* (Washington, DC: U. S. Government Printing Office, 1970), 208.

³⁹ Hoyt, *Backwater War*, 86.

⁴⁰ U.S. Army, *Rapido River Crossing*, 5.

⁴¹ Hoyt, *Backwater War*, 91.

defenses and get to Rome.⁴² The Anzio landing, Operation Shingle, was under a very restrictive timeline because the landing vehicles would only be available to the Italian campaign until January 1944. After those ships returned to Britain the Allies in Italy would have no way of resupplying the beachhead troops incurring a huge risk if the land battle could not break through and support from the south. To make the amphibious landing feasible General Clark would attack the Gustav Line with a large number of troops several days before the landing to draw the German reserves away from Rome. The success of Anzio would depend on the Fifth Army breaking through into the Liri Valley and fighting seventy-five miles up the coast.⁴³ Unfortunately, the Rapido River and the significant German defense along the Gustav Line blocked the Liri Valley. This fact should have alerted the Fifth Army to the fact the Germans did not intend to allow the Allies to cross into the valley easily. The plan however was created by an optimistic inexperienced staff and not by the commanders who had to carry them out.⁴⁴

The Allied forces were tired. Both the British and American corps switched out divisions to allow soldiers to rest and recuperate prior to the attack. Since crossing the Volturno, the divisions had lost 26,000 soldiers, 16,000 of them while breaking through the Bernhart Line.⁴⁵ The Allies were finally at the Gustav Line facing seven German divisions in fixed positions.

The plan to support the landing was an attack that would pin down the German forces along the Gustav Line and prevent them from moving against the Anzio beachhead. The operation would be better if the attack caused the commitment of German reserve forces near Rome to move to the Gustav Line. The operation would be a complete success if the Allied units

⁴² Blumenson, *Salerno to Cassino*, 294-296.

⁴³ Hoyt, *Backwater War*, 103.

⁴⁴ Carlo D'Este, *World War II in the Mediterranean 1942-1945* (Chapel Hill, NC: Algonquin Books of Chapel Hill, 1990), 124.

⁴⁵ Hoyt, *Backwater War*, 103.

managed to break through the defenses and move through the Liri Valley to link up with the Anzio beachhead.⁴⁶

The practice landings for Anzio by the IV Corps resulted in several landing vehicles sinking. These vehicles would not be replaced by craft outside of the Italian campaign and would affect the river crossing operations later.⁴⁷ The Germans however thought an amphibious landing was unlikely so the deception plans of the Allied forces worked.⁴⁸

Beginning on January 12, 1944 the Fifth Army was to pin down the Germans on the Gustav Line, break through the line, and attack north through the Liri Valley to support the Anzio landing. The plan required the French, British, and American units to all cross the Gustav Line. The French Expeditionary Force was to cross the upper Rapido River and move through the high ground behind Monte Cassino on the east. Five days later, the British X Corps on the west was to cross the Garigliano River, and move east to take the high ground overlooking the Liri Valley from the west. The American VI Corps was to cross the Rapido in the center three days after the British on 20 January 1944. Two days later the landing at Anzio was depending on the land operation to have attracted the German reinforcements from outside of Rome.⁴⁹

The Rapido River, normally only forty to sixty feet wide with a depth of eight to twelve feet, did not look like a hard river to cross.⁵⁰ Crossing the Rapido River in January, however, was not ideal. Heavy rains and melting snow caused all the rivers in the area to overflow their banks and flood the lowland. This meant the river was near flood conditions, making the approaches to the river swampy and vehicular traffic impossible, additionally the river water was near freezing,

⁴⁶ Ibid.

⁴⁷ Blumenson, *Salerno to Cassino*, 320.

⁴⁸ Hoyt, *Backwater War*, 104.

⁴⁹ Blumenson, *Salerno to Cassino*, 313-314.

⁵⁰ Fred Walker, *From Texas to Rome: A General's Journal* (Dallas, TX: Taylor Publishing Co., 1969), 298.

and the current swift. On the far side of the river was the final German line south of Rome. Over the last few months the Germans built concrete bunkers, weapons pits, steel turrets for machine guns, and barbed-wire entanglements on the slopes facing the river.⁵¹

The American units from the 36th Infantry Division from Texas commanded by General Walker would be the center of the crossing operation for VI Corps. General Walker had previous experience with a river crossing during the First World War, in fact had earned a Distinguished Service Cross, for “holding a front of more than four and a half kilometers along the Marne River” against the Germans.⁵² Walker knew that crossing a defended river would be very difficult if not impossible. According to Edwin P Hoyt, “Walker wanted to cross along the Upper Rapido where the river was narrow, get into the mountains, and move into the Liri Valley from the east, which would then be behind the Gustav Line.”⁵³ Walker’s request to change the crossing site was denied when General Clark overruled the counsel of his senior commanders.⁵⁴ Clark told Walker the Rapido had to be crossed near Sant’Angelo and the 36th Infantry Division had to do it. What General Clark did not explain was the 36th Infantry Division only had to keep the Germans focused on the Gustav line, getting the Germans to commit reinforcements. The overall plan was not dependent on the 36th actually crossing the river.⁵⁵

The two divisions of the French Expeditionary Corps on the east began their attack on 12 January. After four days of fighting, the French were at the upper Rapido but there they had to

⁵¹ Hoyt, *Backwater War*, 104-105. Carlo D’Este, *World War II*, 124.

⁵² Martin Blumenson, *Bloody River The Real Tragedy of the Rapido* (Boston, MA: Houghton Mifflin Company, 1970), 16.

⁵³ Hoyt, *Backwater War*, 105.

⁵⁴ Lee Carraway Smith, *A River Swift and Deadly* (Austin, TX: Eakin Press, 1989), 19.

⁵⁵ Hoyt, *Backwater War*, 105-106.

pause. The French did not have the forces to breakthrough and could not accomplish the mission of crossing or securing the eastern mountains.⁵⁶

The British X Corps plan of attack used two divisions against the Germans defending the Minturno ridge to the Ausente Valley. The British 5th Infantry Division would attack along Route 7 with the Minturno Ridge as its objective and the 56th Infantry Division was to secure the high ground over looking the road that ran up the Ausente Valley. The British 46th Infantry Division was to wait and support the flank of the American II Corps when it attacked across the Rapido River.⁵⁷

On 15 January, the British managed to cross the Garigliano River using rafts and eliminated the German outposts. Both Allied planes and naval ships bombed the Germans on 16-17 January, and the British attacked on land. By 18 January, X Corps had ten battalions over the river and the two divisions expanded their bridgeheads and secured their objectives of the Minturno Ridge and high ground of Castelforte. The first bridge was assembled on 20 January but was under German artillery fire so vehicle crossings were conducted only at night. This rapid build up of troops by X Corps resulted in the Germans committing the reserves from near Rome.⁵⁸ At this point, General Clark had the opportunity to shift the main effort to the British and the Garigliano River but instead continued with the plan to cross the Rapido River with American units as the main effort.⁵⁹

The German counter-attack on X Corps started on 20 January. The X Corps forces could not move forward into the Ausente Valley. Additional river crossing attempts by the British failed. The major reason for this failure was the loss of forty landing craft during the Anzio

⁵⁶ Blumenson, *Salerno to Cassino*, 314.

⁵⁷ Hoyt, *Backwater War*, 106.

⁵⁸ Ibid, 107.

⁵⁹ Carlo D'Este, *World War II*, 123.

practice assault, which were replaced from the X Corps. The Fifteenth Army Group Commander, however, was delighted because the Germans had committed their reserves, which left fewer forces to oppose the Anzio landing.⁶⁰

The failure of the French to secure the high ground on the east side left the American right flank exposed. The failure of the British to secure the second bridgehead meant the American left flank was also still exposed. Overall this meant the Americans attacking in the center would experience direct fire from both sides of the Liri Valley from the Germans.

The 36th Infantry Division's crossing site was directly opposite German defenses on high ground leading into the Liri Valley. This location gave the Germans excellent fields of fire and observation over the 36th Infantry Division's area of operations. The near shore terrain was flat, and lacked covering vegetation for almost a mile on the friendly side of the river because the Germans had cut down all of the trees clearing fields of fire and mined the approaches to the river. The Germans also diverted the flow of the river to flood the area making it nearly impossible for vehicles to approach the river.⁶¹

In preparation for the crossing, the two regiments of the 36th assigned to make the assault crossing along with divisional engineers conducted rehearsals at the Volturno River. The rehearsals provided an opportunity for the infantry to work with the engineers, giving the soldiers and leaders confidence to conduct the upcoming mission. Following the practice run however, General Walker thought the rehearsals were "of little value because of the different characteristics of the two rivers."⁶² Prior to the crossing, General Walker changed one of the assault crossing regiments against the advice of the engineers. This meant that only half of the crossing forces had conducted any type of rehearsal before the attack.

⁶⁰ Hoyt, *Backwater War*, 108.

⁶¹ Carlo D'Este, *World War II*, 124.

⁶² U.S. Army, *Rapido River*, 7.

The engineers conducted reconnaissance of the river, selecting crossing sites and marking lanes cleared of mines several days before the assault. The Germans still had active patrols on both sides of the river and many of the marked lanes were mined again before the day of the crossing. Additional difficulties included each regiment involved with the Rapido assault would be short five hundred troops even after replacements arrived. These new men were inexperienced and would be not be familiar with their leaders.⁶³ General Walker believed everything that could be done to prepare for the crossing had been done but still had reservations about the 36th Infantry Division's ability to complete the mission under the circumstances.⁶⁴

Despite the failure of the adjacent French and British units, the 36th Infantry Division was ordered to begin their initial assault at 1800 hours on 20 January 1944. Two hours later, near Sant'Angelo, the 141st Regiment's assault boats and bridging equipment were still not at the river. Due to the muddy near side, vehicles could not get closer than two miles to the river and equipment had to be hand carried. Originally the 36th was to receive twelve amphibious trucks for the crossing but because of the Anzio practice accidents none were available.⁶⁵ This meant the same soldiers conducting the assault were also required to haul the river crossing equipment to the river. Even under the cover of darkness surprise was lost. The German artillery was accurate and one-quarter of the river crossing equipment was destroyed before even reaching the river.⁶⁶

The engineer regiment commander was already listing the things that were going wrong. Troops other than the assault force should have carried the boats to the river. The engineer companies had never worked with many of the infantry before resulting in confusion as to who was in charge of the crossings. Several more crossing sites should have been identified because

⁶³ Blumenson, *Bloody River*, 87.

⁶⁴ Walker, *From Texas to Rome*, 305.

⁶⁵ Blumenson, *Bloody River*, 83.

⁶⁶ U.S. Army, *Rapido River*, 42.

troops concentrated on the few paths were vulnerable to enemy fire. Additionally a fog covered the route markers, and troops that strayed from duty. The abandoned boats and bridge equipment along with casualties from the mines also blocked the few routes, making the trip from the equipment parks to the river almost impossible. Finally, the engineers had no way of forcing infantry troops across the river if they did not want to go, many infantry ignored the orders of the engineers.⁶⁷

Of the equipment that did reach the river, bullet ridden rubber assault boats were placed in the water with crews and sank. Poor handling of other boats caused them to capsize, while others were abandoned and swept away by the river as soldiers sought cover. Out of the two assaulting regiments only one was able to reach the far side of the river. The hundred troops that made it across were not enough to increase the bridgehead, especially with all the support still on the near shore.⁶⁸

Engineers originally planned for four foot bridges to be place across the river. All four were damaged in route to the river and only one could be assembled from the remaining undamaged parts. The bridge was finally assembled by 0400 21 January and by 0630 about half the troops from the assault company were across the river. A vehicular bridge could not be started at all because of the German fire. This same enemy fire disabled the telephone wires linking the units on the far side with the battalion headquarters. This left the unit on the far side of the river with no way to communicate their progress as the radios had also been lost or damaged in the crossing. When daylight arrived the remaining units took cover and the unit on the far side was left without hope of immediate reinforcements.⁶⁹

⁶⁷ Blumenson, *Bloody River*, 91.

⁶⁸ Ibid, 92.

⁶⁹ Ibid, 92-93.

At the same time the 143rd Regiment had better luck getting through the cleared lanes to the river. At 2000, 20 January a platoon was able to cross with little difficulty. As the boats returned German shells destroyed all the boats and caused casualties on both sides of the river. The one foot bridge installed was also hit and the continued German fire prevented the engineers from repairing the damage. Additional boats brought from the engineer park allowed the remainder of the assault company to cross by 2145. With the assistance of the new boats and two installed foot bridges an entire infantry battalion crossed the Rapido by 0500, January 21. This battalion was unable to advance against the German resistance, forced back to the river, and retreated to the near side by 1000.⁷⁰

At the second crossing site of the 143rd Regiment, engineer guides were lost in the fog and walked into minefields. Because of the confusion it took several hours for order to be restored, by 2300 all of the rubber boats were destroyed. As the infantry waited for more boats to be brought up to the river by the engineers, engineers waited at the crossing sites for the enemy fire to subside before starting to install foot bridges. By morning the commander had been relieved of command but no troops crossed the river at this site.⁷¹

General Clark at the Fifth Army headquarters was told the attacks of X Corps had resulted in the Germans committing the reserves from Rome to the Gustav line to reinforce. He was also told the 36th had been unable to cross the Rapido river and into the Liri Valley. Focused on the Anzio landing, Clark told the II Corps commander General Keyes to continue the assaults to get tanks and tank destroyers across the Rapido for the overland assistance needed to make the amphibious landing a full success.⁷² General Walker having already told his regimental commanders to renew the attacks at nightfall tried to explain to General Keyes that an earlier

⁷⁰ Hoyt, *Backwater War*, 115.

⁷¹ Blumenson, *Bloody River*, 96-97.

⁷² U.S. Army, *Rapido River*, 44.

attack would not be feasible during the day due to the lack of equipment and enemy fires. Keyes told Walker to conduct the assaults as soon as possible.⁷³

The 143rd Regiment conducted a second assault as ordered at their two crossing sites. These assaults could not begin until 1600 21 January because additional equipment was needed from the rear. Smoke was generated to mask the operation but the exact same crossing sites were used during the second attempt. The Germans already knew where the crossing sites were located so it did little to protect the soldiers and actually made it more difficult for the friendly forces. A battalion from the regiment making the second assault did manage to cross by midnight. On the far side the unit was unable to push past five hundred meters from the river because of heavy German fire. The troops on the far side would need tanks to make any progress. The engineers had not up to that point even started a bridge that could cross vehicles because of the German fires. Assembling a Bailey bridge under fire was not part of engineer doctrine but the engineers tried to comply. By 0600, 22 January the equipment was still on the way to the crossing site having to be hand carried from vehicles stuck in the mud far from the river and it was apparent a bridge would not be assembled by day.⁷⁴ At the other crossing site the troops across the river were unable to move more than two hundred meters from the riverbank. By 0630, 22 January two foot bridges were in place but mainly used to evacuate wounded to from the far side back to the rear. At noon the 143rd commander ordered his units to withdraw.

The 141st Regiment's second attempt was conducted at 2100 hours that same day. Most of the boats brought forward were defective in some way due to German machine gun fire. Using the few undamaged boats two platoons crossed the river and eliminated the German riflemen from the far side. Engineers begin assembling foot bridges at 0200. By dawn, two battalions used the foot bridges to cross over the river. The six rifle companies that managed to get to the far side

⁷³ Blumenson, *Bloody River*, 105.

⁷⁴ Ibid, 110-111.

found no survivors from the previous day. These troops pushed out a thousand meter bridgehead but as the day progressed were unable to move further. As the 143rd regiment retreated the 141st received more pressure from the Germans. Soldiers that were able swam back across the river but by 2000, 22 January the rest had been killed or captured.⁷⁵

Throughout all of the American attempts the engineers were unable to install more than foot bridges that lasted only a short period of time. Under the direct fire of the Germans, the engineers could not construct bridging adequate to get tanks to the far shore. The combined efforts of the assault crossings cost the 36th Infantry Division almost all of its bridging assets and 1681 casualties.⁷⁶ “The Rapido-Garigliano crossings were a shambles that left the Fifth Army stalled at the mouth of the Liri Valley with little prospect for breaking the Gustav Line in the foreseeable future.”⁷⁷

It was not until May 1944 before the Gustav line was finally broken by a combined assault of the Fifth and Eighth Armies concentrated along a twenty-mile front between Monte Cassino and the sea. In June the Anzio forces broke out of the beachhead and captured Rome allowing the German forces to retreat north. This was six months after the desired time of achieving the end state of the Allied forces acquiring Rome by Christmas 1943.

It is clear the tactics of crossing the Rapido River could be improved, so it makes sense that several previous studies have focused on how the tactics could be improved, however the Rapido crossing also suffered from problems with operational art. The reason for the Allied failure to achieve the strategic aims almost half a year later than expected was the failure of the army and corps commanders and planners to articulate those aims and their importance to the division commanders responsible for the tactical actions. This lack of communication of the

⁷⁵ Blumenson, *Bloody River*, 116-117.

⁷⁶ Ibid, *Bloody River*, 118.

⁷⁷ Carlo D’Este, *World War II*, 127.

higher command intent resulted in the 36th division commander and staff being unable to coordinate the tactical tasks in time, space, and purpose to achieve the strategic aims of the campaign. General Clark did not feel that the division commanders needed to know the overall strategic aims. This is apparent when General Clark told the 36th division commander to cross the Rapido River and would not consider alternative locations or plans.⁷⁸ General Walker, the division commander not understanding his unit's part in the overall campaign was unable to support the operation fully, thinking it was an unachievable mission. If General Walker truly understood the 36th Infantry Division's unit mission as it pertained to the entire campaign scheme of maneuver he could have articulated different ways for the higher command to achieve the strategic ends. The Allies could have then avoided fighting for six additional months to cross the Gustav Line and finally capture Rome after the corps failed to cross the Rapido River the first time.

Case Study 2: A River Crossing Success

The soldiers in the Burma Campaign endured some of the worst conditions and fighting of the Second World War. The British, defeated by the Japanese in 1942, retreated from Burma into India to reconstitute the forces. In August 1943, the Allies created South East Asia Command (SEAC) responsible for the South-East Asian Theater under Admiral Lord Lewis Mountbatten.

A strategic aim laid out by the Chiefs of Staff in London was to ensure the Chinese continued to stay in the war. This required the forces in Burma "to develop, broaden and protect the air link to China, in order to provide maximum and timely flow of POL (Petrol, Oil, Lubricants) and store to China in support of Pacific operations."⁷⁹ This was mainly accomplished using air assets but a land route known as the Ledo Road was also under construction.

⁷⁸ Lee, *A River Swift*, 19. Hoyt, *Backwater War*, 105-106.

⁷⁹ William Slim, *Defeat Into Victory*, New Ed ed. (Hong Kong: Macmillan, 1986), 373.

Responsible for several plans during this time, the SEAC, had to focus on only a few due to a lack of resources. For example, Burma, a secondary campaign to the actions in Europe lost landing craft recalled to support the Normandy landings.

The commands involved in the Burma Campaign were the Eleventh Army Group with subordinate unit of the Fourteenth Army commanded by Field-Marshal William Slim. Originally, Fourteenth Army controlled all land forces in Burma to include the XV Corps commanded by General Philip Christinson and the Northern Combat Area Command (NCAC) under by LTG Joseph Stilwell. In November of 1944 the chain of command reorganized structure and Eleventh Army Group headquarters was replaced by Allied Land Forces South East Asia under Admiral Lord Lewis Mountbatten (ALFSEA) with XV Corps and NCAC placed under its command. ALFSEA arranged a series of offensive operations into Burma during and following the monsoon season of 1944. At the same time the Japanese also made changes to their command. The new Japanese commander would change the Allied plans by withdrawing behind the Irrawaddy River instead of fighting west of the Chindwin River.⁸⁰

Three fronts divided Burma. The Southern Front supported operations in central Burma through XV Corps amphibious landing at Akyab in January 1945. This allowed for the construction of airfields on the Ramree and Cheduba Islands. The Northern Front under NCAC was responsible for finishing the Ledo Road and communicating with the Chinese command. The Fourteenth Army, the main effort, consisting of the IV Corps and XXXIII Corps, was responsible for the Central Front. Following the several successful operations including the Imphal-Kohima where the Fourteenth Army forced the Japanese forces to withdraw to the Chindwin and destroying the Japanese Fifteenth Army. This set the conditions for the follow-on Irrawaddy operations.

⁸⁰ S. Woodburn Kirby, *The War Against Japan Vol. IV The Reconquest of Burma* (London: Her Majesty's Stationery Office, 1965), 32, 39, 60, 113-114, 188.

In June 1944, the main strategic aim in Burma was to maintain and expand the communications to China. In July, the British ordered SEAC to advance in three phases: first occupy Kalembo-Kalewa by air, second secure the Shwebo plain by land and air, and finally liberate Burma down to Pakokku-Mandalay with NCAC advancing to Maymyo.⁸¹ Following receipt of the missions Slim analyzed the options. He determined “that the best and quickest way to secure worth-while communications with China was to clear the enemy from Burma, and use Rangoon.”⁸² In September the strategic aim was redefined. SEAC was directed to “recapture all of Burma at the earliest date. Operations to achieve this must not, however, prejudice the security of the existing air supply to China, including the air staging post at Myittha and the opening of overland communications.”⁸³ This new guidance did not change the plans of the Fourteenth Army. Slim wanted to defeat the Japanese forces on the Shwebo plain with the Irrawaddy at the enemy’s back. This would allow the Allied troops an area where both their air superiority and armor could be used to the greatest advantage. Based on previous experience, Slim believed the Japanese would fight between the Chindwin and Irrawaddy rivers because the commander would not want to lose face.⁸⁴

General Slim intended to achieve his goals under Operation Capitol. The Fourteenth Army’s portion of the plan was an advance across the Chindwin, supported by the 221 Group Royal Air Force, to occupy the area between the Chindwin and Irrawaddy Rivers and continue to include the capture of Mandalay.⁸⁵ The main objectives of Operation Capitol were the airfields

⁸¹ Charles F. Romanus and Riley Sunderland. *U. S. Army in World War II The China-Burma-India Theater, Time Runs Out in CBI* (Washington, DC: Office Chief of Military History Department of the Army, 1958), 87. Kirby, *War against Japan*, 101.

⁸² Slim, *Defeat*, 374.

⁸³ Geoffrey Evans, *Slim as Military Commander* (London: B.T. Batsford, Ltd, 1969), 176-177.

⁸⁴ Julian Thompson, *The Imperial War Museum Book of the War In Burma 1942-1945* (London, England: Pan Books, 2003), 271.

⁸⁵ Slim, *Defeat*, 375.

near Yeu and Shwebo to support logistics and enabling reinforcement of forward units. The 7th and 19th Indian Divisions and 255 Tank Brigade reinforced IV Corps on the left was to move from the Sittaung bridgehead, capture Pinlebu and Pinbon, and turn south to seize Shwebo. XXXIII Corps reinforced with 2nd British, and 20th Indian Divisions, 268 Brigade and 254 Tank Brigade was on the right was to move from the Kalewa bridgehead and advance towards Yeu and Monywa. The idea was for IV Corps to be the anvil to the hammer provided by the XXXIII Corps, destroying the Japanese on the Shwebo plain.⁸⁶

The Fourteenth Army offensive began on 3 December 1944. As forces moved into their initial locations units met little resistance. The original plan had been based on intelligence that the Japanese would defend north and west of the Irrawaddy was incorrect. The new Japanese commander, Kimura, realized he did not have the means to support a battle on the Shwebo plain and the Japanese withdrew forces across the Irrawaddy in December 1944. Kimura planned to attack as the Fourteenth Army crossed the Irrawaddy.⁸⁷

As soon as Slim realized the Japanese would not give him the decisive battle in the Shwebo plain where he initially hoped to defeat them, he changed the plans of the Fourteenth Army. Fourteenth Army created Operation Extended Capitol, with XXXIII Corps seizing bridgeheads across the Irrawaddy on each side of Mandalay, while IV Corps broke out of the bridgehead at Pakokku followed by a movement to Meiktila.⁸⁸ Fourteenth Army reorganized both IV Corps and XXXIII Corps to support the plan.

The new plan's initial focus was the Japanese supply base and logistics hub at Meiktila. IV Corps would move south behind XXXIII Corps to seized Meiktila and XXXIII Corps would

⁸⁶ Thompson, *War in Burma*, 272. Kirby, *War against Japan*, 150, 163.

⁸⁷ Louis Allen, *Burma, The Longest War 1941-45* (London, England: J.M. Dent & Sons Ltd, 1984), 398.

⁸⁸ Thompson, *War in Burma*, 278.

seize Mandalay. XXXIII Corps with parts of IV Corps would move toward the Irrawaddy from Shwebo and Monywa as a deception to make the Japanese believe that Mandalay was the Army's sole objective. The remainder of IV Corps would move from Sittaung to Pauk and cross the Irrawaddy at Pakokku in secret. Once across the Irrawaddy, the plan was to envelope the Japanese army in a hammer and anvil operation.⁸⁹ XXXIII Corps was to attract the majority of the Japanese army to their bridgeheads and around Mandalay allowing IV Corps to seize Meiktila. This would cause the Japanese to turn and fight the IV Corps for Meiktila. Once this occurred IV Corps would defend and XXXIII Corps would attack the Japanese army from the rear. The intent was to destroy the Japanese army between the two corps.

In order for this plan to work the strength of the force would need to be concealed from the Japanese forces until the attack. A fake IV Corps headquarters using wireless channels was created to mask the movement of the real IV Corps headquarters under radio silence.⁹⁰ This was all part of an elaborate deception plan to confuse the enemy.

Air support for logistics was very important to the success of the mission. Unfortunately, before starting, seventy-five airframes diverted to send supplies to China required the Fourteenth Army staff to reassess logistic capabilities. The staff calculated the reduced air support required the use of the rivers to move supplies. The build up and rate of advance would be just enough to maintain the corps and a minimum reserve of ammunition and equipment for the river crossings and follow-on battle. The plan did not allow for additional enemy interference or weather delays.⁹¹

Late December XXXIII Corps moved out from the Kalewa bridgehead on the Chindwin, reaching Monywa on 14 January. The crossing of the Irrawaddy began with the 19th Indian

⁸⁹ Allen, *The Longest War*, 399.

⁹⁰ Allen, *The Longest War*, 400. Kirby, *War against Japan*, 174.

⁹¹ Kirby, *War against Japan*, 125. Slim, *Defeat*, 397. Thompson, *War in Burma*, 279.

Division fifty miles north of Mandalay. The Japanese, thinking this was a major crossing committed their reserve to remove the bridgehead. Once through the bridgehead the 19th Indian Division moved south. The 20th and 2nd Divisions of the XXXIII Corps continued to move eastward from Mawlaik and Kalewa. Mines blocked the road from Shwegyin to Ye-u and it was not until 23 December that the troops reached Pyingaing. The 2nd Division seized Ye-u and the airfield there on 2 January 1945 and crossed the Mu River with little opposition. Now both the 19th and 2nd Divisions of the XXXIII Corps moved toward Shwebo as the Japanese retreated toward the Irrawaddy. Shwebo was taken on 8-11 January 1945.⁹²

Meanwhile IV Corps was moving in secret to Pakokku along 320 miles of fair weather road. This was difficult at best as the unit had to make the road most of the time. The air support was critical, preventing Japanese reconnaissance planes from investigating the clouds of dust created by the movement of troops and tanks along the dirt track. Additionally an air bombardment of Gangaw allowed the Lushai Brigade to attack the Japanese there without giving away the movement of the IV Corps.⁹³ By the second week of January the divisions of the Fourteenth Army were approaching the Irrawaddy along a two hundred mile front from Wuntho in the north to Pakokku in the south. The units were set to conduct an opposed river crossing.⁹⁴

The Irrawaddy River is one of four main rivers in Burma. Stretching for thirteen hundred miles, it is a main thoroughfare for trade. The river varies with the seasons, rising during the monsoons. The current also varies from one and a half to six miles an hour. In January, the water is low and the current at its slowest. Even in January is still a very wide river and can be anywhere between five hundred and two thousand meters. Along the narrow sections the banks

⁹² T.R. Moreman, *The Jungle, the Japanese and the British Commonwealth Armies at War 1941-45* (New York, NY: Frank Cass, 2005), 185.

⁹³ Kirby, *War against Japan*, 175.

⁹⁴ Kirby, *War against Japan*, 178. Moreman, *The Jungle*, 188.

are steep, and in the wide parts the river has islands and sandbanks. The areas where the river has receded the ground is soft sand unable to hold vehicles. The crossing site selections would require detailed reconnaissance.⁹⁵

The Japanese were regrouping and knew the Allies were about to attempt a crossing. Realizing it was impossible to cover two hundred miles of river front, the Japanese concentrated defenses at the most likely crossing sites. Small penetration units were prepared to delay and confuse the Allied forces. Additionally the artillery and tanks were held in reserve.⁹⁶

The Allied crossing of the Irrawaddy was difficult both because it was an opposed crossing and there was a severe shortage of river crossing equipment. In order to compensate for the lack of equipment, the Fourteenth supplemented their assets with captured pontoons and acquiring Burmese cargo carriers.⁹⁷ Each Corps would only have enough equipment to cross one division at a time.⁹⁸ The plan would work best if all the units could cross at the same time but with the limited assets this was not possible. Instead the 19th Indian Division north of Mandalay would cross first. This would cause the Japanese to believe the 19th was joining the British 36th Division already east of the Irrawaddy and attack south to Mandalay. After a pause the XXXIII Corps would cross. IV Corps would take longer to reach the crossing sites near Pakokku but the lead unit should cross almost simultaneously with the XXXIII Corps crossings. As soon as a bridgehead was established, IV Corps would attack with both mechanized and airborne units on Meiktila.⁹⁹

⁹⁵ Slim, *Defeat*, 407. Thompson, *War in Burma*, 297.

⁹⁶ Slim, *Defeat*, 408-409.

⁹⁷ Thompson, *War in Burma*, 297.

⁹⁸ Slim, *Defeat*, 410.

⁹⁹ Moreman, *The Jungle*, 184. Thompson, *War in Burma*, 294.

On 9 January, XXXIII Corps reached the Irrawaddy near Thabeikkyin and found Japanese units on both sides of the river. Starting with the west bank the 19th Indian Division begin clearing and met with opposition. The 2nd British Division was in the Shwebo area, while the 20th Division was moving down to Monywa. IV Corps was on the march to Pakokku, the Lushai Brigade about to attack Gangaw with the 7th Division behind. The 17th Division had returned to Imphal from India and was re-equipping as a mechanized and airborne unit. The 5th Division in Jorhat was the Fourteenth Army Reserve.¹⁰⁰

The 19th Indian Division begin crossing in stealth across the Irrawaddy on the 11th of January. At first only crossing a company a day, the 19th crossed a battalion on 14 January at a crossing site where there were no Japanese post along the river. It was not until 17 January that the Japanese realized there was a serious attempt by the Allies to cross and by this time the 19th Division had three battalions across. By 19 January, the entire 64th brigade had crossed and was expanding a second bridgehead. A high point secured two and a half miles from the crossing point took away the Japanese's direct observation for their artillery. This enabled the Allies to maintain the bridgehead. The numerous attacks along the river confused the Japanese as a result unsure of the main crossing they took their time to concentrate forces. The intent was to get the Japanese to commit additional units and artillery. It was fortunate that the additional Japanese units assaulted piecemeal as they arrived instead of a coordinated attack in mass. The enemy attack lasted for three weeks but with the assistance of air support the 19th held the bridgehead. By the beginning of February the 19th had tanks on the east side of the river preparing for a break-out.¹⁰¹

As the 19th Indian Division crossed the Irrawaddy, the 20th moved toward Monywa on the Chindwin. The 20th cleared Monywa by 22 January and the Fourteenth Army headquarters moved

¹⁰⁰ Kirby, *War against Japan*, 176. Slim, *Defeat*, 407-408.

¹⁰¹ Kirby, *War against Japan*, 176-178. Slim, *Defeat*, 414.

there from Imphal. The 20th then moved to the Irrawaddy at Myinmu and began conducting reconnaissance for a river-crossing site. This time was used to build up supplies and equipment for the XXXIII Corps for the expected Irrawaddy battle. This also allowed time for IV Corps to continue toward Pakokku.¹⁰²

According to Slim, “the actual 20th Division crossings, covered by several feints, began on the night of the 12th / 13th February.”¹⁰³ The division had two main crossings, one by the 100 Brigade and another by 32 Brigade. The sites selected had firm ground, some cover but more importantly no permanent Japanese posts according to the reconnaissance. The 100 Brigade crossed along a fifteen hundred yard width of the river. The troops dealt with submerged sandbanks and strong currents. Several boats were stuck in the sandbanks but luckily there was no opposition while on the river. Once across the troops encountered small arms fire and mortar fire. Once the first unit landed the remainder of the brigade quickly followed. To support the crossing, a heavy air strike on the Japanese artillery along the river the previous day caused the enemy guns to move during the crossing. The evening of 13 February, 100 Brigade had established a small bridgehead. The crossing site of the 32 Brigade was between two Japanese units this was fortunate because they had a wider portion of the river to cross. The same problems of currents and sandbanks caused greater difficulties in getting boats across the river but they did manage one battalion by dawn. During the day all movements across the river stopped. Similar to the 19th Division’s crossing sites the Japanese were slow to identify the main crossing and coordinate an attack. It was not until 15 February that the Japanese fighting became strong. By this time the bridgehead was six miles by two and on 16 February the Allies began crossing during the day.

¹⁰² Kirby, *War against Japan*, 181, 188.

¹⁰³ Slim, *Defeat*, 420.

Fighting continued from 21 to 26 February until the Japanese division was defeated with the 20th Division holding an eight-mile wide by two and a half mile deep bridgehead.¹⁰⁴

As the XXXIII Corps was crossing in the north, the IV Corps was moving south toward the Irrawaddy at Pakokku. On 18 January, the IV Corps consolidated near the Kan area, one hundred and sixty miles from the objective. The IV Corps commander had the deadline of 15 February to cross the Irrawaddy. From Kan, to prevent delays the corps planned to advance on a wide front to outflank the enemy holding the single road the corps traveled. The 28th East African Brigade would conceal the arrival of other troops, behind 114th Brigade would follow with the 7th Division headquarters. 89 Brigade, on pack transport would take jungle trails on the left flank and return to the main route at Pauk forty mile from Pakokku. The Lushai Scouts and Chin Hills Battalion guarded the left flank of the IV Corps. On the right flank was the Falam Scouts and the 33 Brigade remained at Gangaw until transport became available.¹⁰⁵

The IV Corps advance began on 19 January from the Kan area. Japanese rearguards set mines and obstructions along the main road to delay the British forces. The mines caused minimal problems for the engineers and elephant units to clear. The 89 Brigade seized Pauk on 28 January, gaining high ground overlooking the Irrawaddy. Once at Pauk the 7th Division took the lead, the 114 Brigade passed through the 89 Brigade and attacked Pakokku on 3 February. The East African Brigade moved forty miles south of Pakokku to make a feint crossing near Chauk. At this time the 33 Brigade was moved forward from Gangaw to Pauk.¹⁰⁶

To support the upcoming battle the units built airstrips and improved the roads for the vehicles and tanks could move forward. The IV Corps commander planned to cross near Nyaungu at the narrowest part of the river which was still a thousand yards wide. Because this

¹⁰⁴ Moreman, *The Jungle*, 186-187. Slim, *Defeat*, 420-421.

¹⁰⁵ Slim, *Defeat*, 422.

¹⁰⁶ Kirby, *War against Japan*, 257. Slim, *Defeat*, 422.

was the most likely crossing site, deception was essential. In addition to the East African Brigade feint at Chauk, two additional demonstrations, one at Pakokku and another at Pagan were planned. The secret movement of the IV Corps worked, the Japanese did not know a crossing would be attempted near Nyaungu. Additionally, the enemy was covering this fifty-mile stretch of the river with minimal forces.¹⁰⁷

The IV Corps crossing site was located between two enemy units, an advantage to the Allied units. The advance to the river began and immediately the 114 Brigade encountered strong opposition near Pakokku. A deliberate attack using tanks was required on 10 February to remove the Japanese from the area. 89 Brigade, assigned to attempt a feint, found that opposite the crossing site near Pagan were no enemy forces. The IV Corps commander decided to make this a subsidiary crossing. 28 East African Brigade reached its objective with no serious enemy action began to stage for a crossing. 33 Brigade occupied Myitche and made preparations for the main crossing at Nyaungu.¹⁰⁸

For the main crossing extensive reconnaissance showed the river had changed because of rain in February. No direct crossing sites were found and the diagonal crossing charted was over two thousand yards. This would become the longest river crossing of the war. Originally the main crossing was to be conducted during the day with artillery, air, and tank support but the shortage of air supply and the difficult road made it infeasible to receive the ammunition in time. The option to cross at night was abandoned because there would be no moonlight and the only clear way was difficult to follow. The first crossing conducted before dawn in silence followed by additional crossings in power craft with all available fires. Final calculations showed this crossing, if done perfectly, would take over seven hours.¹⁰⁹

¹⁰⁷ Moreman, *The Jungle*, 188. Thompson, *War in Burma*, 299.

¹⁰⁸ Slim, *Defeat*, 424-425.

¹⁰⁹ Moreman, *The Jungle*, 190. Slim, *Defeat*, 425.

Even under the extreme conditions, the units were set to conduct the crossings by 13 February. That night the troops moved to the water and began crossing at 0400. Successfully reaching the far side the troops moved up the cliffs without meeting any enemy forces. The second movement across did not go as well as the first. Some boat engines would not start; other boats had been damaged on the first trip causing a delay. In order to get the boats moving the commander started boats across the river as soon as they were loaded and ready regardless of the order. This resulted in a reserve company in the lead. To move into the correct position the reserve boats decided to circle to get in the right position. The engines were too weak for the current and the reserve unit drifted down stream. The remaining boats followed in confusion. This is when the enemy fired on the crossing forces. Allied troops were killed and boats were sunk. The tanks on the near side bank opened fire to suppress the enemy and allow the remaining boats to return. This crossing was now in danger of failing.¹¹⁰

This was not the only failure, the 89 Brigade subsidiary crossing also met with setbacks. A patrol hidden on the east bank in the night near Pagan reported the Japanese had reinforced the town. The assault company tried crossing in the Burmese boats anyway. As they came under fire the Burmese boatmen panicked and the unit returned to the start point. The attempted crossing had failed. As the 89 Brigade decided what to do next, a boat waving a white flag came ashore. The Japanese had marched out of Pagan and left the Indian National Guard to garrison the town. The Indian National Guard wished to surrender. By that evening an Allied battalion was on the outskirts Pagan.¹¹¹

Meanwhile at the main crossing, engineers were working to repair boats for another crossing. The second attempt around 1000 embarked under heavy cover fire by artillery and air. The entire company reached the beaches intact and moved up the cliffs. The remainder of the

¹¹⁰ Slim, *Defeat*, 428.

¹¹¹ Slim, *Defeat*, 428-429. Thompson, *War in Burma*, 301.

battalion followed and by nightfall three battalions were across the river. The 33 Brigade formed a small bridgehead as the ferrying stopped at dark to prevent the losing of boats in the current. That night although prepared for a counter-attack none came. Crossings resumed the following day and no enemy opposed the units. By 16 February, Nyaungu was under Allied control and the two bridgeheads joined.¹¹²

This success was due to the Japanese continued belief that the crossings of the XXXIII Corps were the main effort.¹¹³ The Allied deception worked. The feint near Chauk by the 28 East African Brigade was so convincing that it brought prompt and violent retaliation. The Japanese counter-attacked in strength and IV Corps sent reinforcements to prevent a threat to the road from Pauk to Nyaungu. The 7th Division bridgehead conducted patrols and air reconnaissance to give early warning of a Japanese counter-attack. One finally came on 17 February in the form of air attacks on the crossing sites and Japanese troops marched against the left flank of the 33 Brigade's bridgehead at Nyaungu. On 19 February, 89 Brigade came against the a series of counter-attacks from the Japanese unit from Chauk.¹¹⁴

The original plan was to expand the bridgehead for two division before allowing the 17th Division to cross but to expedite the attack on Maiktila the IV Corps commander allowed the 17th to cross the river. As soon as units crossed they were pushed out from the bridgehead but it was not apparent to the Japanese that a new unit had arrived.

During this time the XXXIII Corps' 20th Division was keeping the Japanese occupied. To continue to keep them in the north the 2nd Division crossed the Irrawaddy closer to Mandalay. Crossing equipment already in short supply was gathered and the 2nd Division prepared to cross on the 24 February. That night the 2nd Division began the crossing at the village of Ngazum ten

¹¹² Slim, *Defeat*, 429-430.

¹¹³ Thompson, *War in Burma*, 304. Moreman, *The Jungle*, 185.

¹¹⁴ Slim, *Defeat*, 431.

miles from the 20th Division's bridgehead. This crossing was seriously opposed by Japanese troops. Of the three battalions that attempted initially only one made it half way across the river to an island. A second crossing on 25 February under the cover of smoke passed two battalions. By the morning of the 26th two full brigades from the 2nd Division including some tanks were on the far side.¹¹⁵

The successful crossings allowed the Allied forces to take both Mandalay and Meiktila. On 1 April the Japanese conceded defeat in the battle of Meiktila and Mandalay and retreated to Pyawbwe.¹¹⁶ The defeat of the Japanese at this point achieved the strategic aims.

The tactical actions at the crossings of this case study are interesting but the success of this campaign was driven by the pursuit of the strategic objective through the clear, purposeful arrangement of the tactical actions in time, space, and purpose. General Slim ensured his subordinates understood not only the tactical tasks they would be required to complete but explained how important each was to the overall campaign. Slim gave his subordinates tasks but did not direct the actions of each unit on the ground allowing the subordinate units the leeway to complete the assigned tasks as part of a whole operation. This is very important when a river crossing is involved as the higher headquarters will not likely be on the ground to see where the enemy is located. Crossing a river where the enemy is the strongest is likely to cause the crossing unit to reach culmination and not achieve the desired end state.

Conclusion

“Operational art is how commanders balance risk and opportunity to create and maintain the conditions necessary to seize, retain, and exploit the initiative and gain a position of relative advantage

¹¹⁵ Slim, *Defeat*, 433. Moreman, *The Jungle*, 187.

¹¹⁶ Moreman, *The Jungle*, 194. Thompson, *War in Burma*, 319.

while linking tactical actions to reach a strategic objective.”¹¹⁷ “Operational art provides a means for commanders to derive the essence of an operation. Without it, tactical actions devolve into a series of disconnected engagements, with relative attrition the only measure of success.”¹¹⁸ Although these definitions of Operational Art were not part of doctrine during World War II, campaigns can still be analyzed for operational art. The two historical gap-crossing studies are examples of how the tension between the strategic aims and tactical actions can make or break an operation. This conclusion points out that the communication of the strategic aims to those responsible for conducting the tactical actions is vital and can account for the success or failure of individual campaigns.

The tension from both the strategic aims and the tactical actions makes the crossing of the Rapido ripe for the elements of operational art. Unfortunately, the tension was too much to make this operation a success. There are several reasons for the failure. The crossing of the Rapido previously analyzed as a tactical failure based on faulty doctrine at the time and a lack of command leadership. The lack of equipment and training on the tactical side, a lack of cohesive doctrine for crossing rivers, and most importantly a lack of understanding of how the tactical actions of the operation fit into the strategic picture are a few reasons for the failure. General Walker, the division commander, responsible for the main river crossing did not understand the end state and conditions required of his unit and therefore was unable to fully support the higher command’s operational approach. This contributed to the immediate failure of the tactical mission resulting in a delay of six months to achieving the strategic goal of securing Rome.

Although General Clark told General Walker that he had to cross the river, he never explained it did not really make much difference if the 36th failed to cross as long as the attack

¹¹⁷ U.S. Department of the Army, *ADP Unified Land Operations* (Washington, DC: Government Printing Office, 2011), 10.

¹¹⁸ U.S. Department of the Army, *Field Manual 3-0 Operations change 1* (Washington, DC: Government Printing Office, 2010), 7-4.

tied down the defending Germans and the reinforcements outside of Rome moved to support along the Gustav Line.¹¹⁹ The understanding of the strategic aims even at the division is important. Commanders that can envision their unit's part in the overall war will have a better chance of success. The higher echelon commanders understood the significance of the continuous push on the German defenses, however, the division commander, General Walker did not and as a result did not fully believe it was a necessary risk. This belief, compounded by numerous tactical errors, resulted in the not only a failed river crossing, the loss of soldiers, and equipment but a failure to achieve the strategic ends of the campaign.

In contrast to the failure of the Rapido river crossings the campaign in Burma is an example of both a successful river crossing and thus campaign. General Slim not only understood the importance of a clear strategic aim, he communicated this to his subordinate commanders. This in turn allowed them to plan within the context of the desired strategic aim. Slim did not force his commanders to cross at a particular location understanding that it was best left up to the commanders on the ground. It would not be beneficial to force a crossing at a particular location if the commander could achieve the end state by crossing at the most likely area of success.

In order to reach the strategic aim it is up to the operational commander and staff to articulate the requirements to the subordinate units. This is done through the arrangement of tactical actions in time, space, and purpose to achieve the strategic aims. Gap crossings are a tactical task and without understanding the end state of the operation, the crossing becomes a tactical action with no purpose. Commanders that understand the gap crossing is only a tactical action that is part of the larger mission to reach and defeat an enemy on the far side are more likely to understand the overall aim of the operation and achieve the strategic aims of the campaign. The commander and staff that takes into account operational art to link the strategic

¹¹⁹ Hoyt, *Backwater War*, 105-106.

aims to the tactical actions will be successful like General Slim crossing the Irrawaddy where as a commander that does not is more likely to be unsuccessful like General Walker failing to cross the Rapido.

BIBLIOGRAPHY

- Allen, Louis. *Burma, the Longest War, 1941-45*. London: Everyman Ltd, 1984.
- Arnold, Edwin J. Jr. *American River Crossing Doctrine: A Look at its Compatibility with Current Force Structure and the Modern Battlefield*. monograph, Fort Leavenworth, KS: U.S. Army School of Advance Military Studies, 1985.
- Barker, M.E. "Smoke for River Crossings." *Infantry Journal*, (Jan 1946): 37-41.
- Blumenson, Martin. *Bloody River: The Real Tragedy of the Rapido*. Boston, MA Houghton Mifflin Co, 1970.
- Blumenson, Martin. *Mark Clark*. New York, NY: Distributed by St. Martin's Press, 1984.
- Blumenson, Martin. *United States Army in World War II: The Mediterranean Theater of Operations: Salerno to Cassino*. Washington, DC: Office of the Chief of Military History U.S. Army, 1969.
- Craven, Wesley Frank and Cate, James Lea, editors. *The Army Air Forces in World War II, Volume 3: Europe: Argument to V. E. Day, January to May 1945*. Washington, DC: Office of Air Force History, 1983.
- Craven, Wesley Frank and Cate, James Lea, editors. *The Army Air Forces in World War II Volume Five The Pacific: Matterhorn to Nagasaki June 1944 to August 1945*. Kingsport, TN: Kingsport Press Inc., 1953.
- D'Este, Carlo. *Fatal Decision: Anzio and the Battle For Rome*. New York, NY: HarperCollins Publishers, 1991.
- D'Este, Carlo. *World War II in the Mediterranean, 1942-1945*. Chapel Hill, NC: Algonquin Books, 1990.
- Ericson, John M. "Some Technical Aspects of an Opposed River Crossing." *Military Review*, (Oct 1944):9-16.
- Evans, Geoffrey. *Slim as Military Commander*. London: B.T. Batsford, Ltd, 1969.
- Hoyt, Edwin P. *Backwater War: The Allied Campaign in Italy, 1943-1945*. 1st ed. Boston, MA: Praeger, 2002.
- Itschner, Emerson C. "The Nakdong River Crossing in Korea." *Military Engineer*, (Mar 1951): 96-100.
- Kirby, S. Woodburn. *The War Against Japan Volume IV: The Reconquest Of Burma; History Of The Second World War: United Kingdom Military Series: Official Campaign History*. London: Her Majesty's Stationary Office, 1965.
- Lyman, Robert. *Slim, Master of War: Burma and the Birth of Modern Warfare*. London: Constable, 2004.
- Mackelfresh, C.H. "Some Infantry Phases of Stream Crossings: An Old Subject in New Form." *Infantry Journal*, (Dec 1928): 575.
- Marin, Albert G. III *Command and Control of River Crossings: Does Current Doctrine Support AirLand Battle Doctrine Intent?* monograph, Fort Leavenworth, KS: U.S. Army School of Advance Military Studies, 1992.
- Moreman, T.R. *The Japanese and the British Commonwealth Armies at War, 1941-45: Fighting Methods, Doctrine and Training For Jungle Warfare*. New York: Routledge, 2005.

- Morison, Samuel Eliot. *History Of United States Naval Operations In World War II: Volume Nine - Sicily - Salerno - Anzio, January 1943 - June 1944*. Boston, MA: Little, Brown And Company, 1975.
- Newell, Clayton R. and Krause, Michael D. general editors. *On Operational Art*. Center of Military History United States Army, Washington, D.C. 1994.
- Romanus, Charles F., and Riley Sunderland. *U. S. Army in World War II (The China-Burma-India Theater, Time Runs Out in CBI)*. Washington, DC: Office Chief of Military History Department of the Army, 1958.
- Shepperd, G. A. *The Italian Campaign, 1943-1945: A Political and Military Reassessment*. New York, NY: Praeger, 1968.
- Slim, William. *Defeat Into Victory*. New Ed ed. Hong Kong: Macmillian, 1986.
- Smith, Lee Carraway. *A River Swift and Deadly: The 36th "Texas" Infantry Division at the Rapido River*. Austin, Texas: Eakin Press, 1989.
- Toguchi, Robert M. *The Evolution of United States Army River Crossing Doctrine and Equipment, 1918-1945*. Ann Arbor, MI: A Beil & Howell Company, 1995.
- Thompson, Julian. *The Imperial War Museum Book of the War in Burma, 1942-1945: a Vital Contribution to Victory in the Far East*. London: Pan Macmillan, 2004.
- Thurston, Benjamin E. "River Crossings: Tactical Principles and Methods Brought Out by Four Historical Examples." *Infantry Journal* (Jan 1929): 32-36.
- U.S. Army, Combat Studies Institute Battlebook 22-A, *Rapido River*. (Ft. Leavenworth, KS), 1984.
- U.S. Department of the Army, *Field Manual 3-0 Operations Change 1*. Washington, DC: Government Printing Office, 2010.
- U.S. Department of the Army, *Field Manual 3-34 Engineer Operations*. Washington, DC: Government Printing Office, 2009.
- U.S. Department of the Army, *Field Manual 3-34.2 Combined Arms Breaching Operations Change 3*. Washington, DC: Government Printing Office, 2000.
- U.S. Department of the Army, *Field Manual 3-90 Tactics*. Washington, DC: Government Printing Office, 2001.
- U.S. Department of the Army, *Field Manual 3-90.12 Combined Arms Gap-Crossing Operations*. Washington, DC: Government Printing Office, 2008.
- U.S. Department of the Army, *Field Manual 90-13 River Crossing Operations*. Washington, DC: Government Printing Office, 1998.
- U.S. Department of the Army, *Field Manual 100-5 Operations*. Washington, DC: Government Printing Office, 1982.
- U.S. Department of the Army, *Field Manual 100-5 Operations*. Washington, DC: Government Printing Office, 1986.
- U.S. Department of the Army, *Field Manual 100-5 Operations*. Washington, DC: Government Printing Office, 1989.
- U.S. Department of the Army, *Field Manual 100-5 Operations*. Washington, DC: Government Printing Office, 1996.

- Walker, Fred L. *From Texas to Rome: A General's Journal*. Dallas, TX: Taylor Publishing Company, 1969.
- Walker, Fred L. Jr. *Mission Impossible at Cassino: The First Assault Across the Rapido River Near Cassino in World War II, January 1944. August 14, 1986*
- Webster, Donovan. *The Burma Road: the Epic Story of the China-Burma-India Theater in World War II*. New York: Farrar, Straus and Giroux, 2003.
- Wells, Gordon M. *U.S. Army River Crossing Doctrine and AirLand Battle Future: Applicable or Anachronistic?* monograph, Fort Leavenworth, KS: U.S. Army School of Advance Military Studies, 1991.